

REMARKS

Amendment

Claim 1 is amended to incorporate the recitation of claim 29. Thus, claim 1 now corresponds to the subject matter of claim 29 rewritten in independent form.

Claim 1 is also amended to employ language in accordance with US practice and to delete superfluous language. These amendments do not narrow the scope of the claim.

Claim 30 is amended to incorporate the subject matter of claim 1, i.e., is amended to be in independent form. Also, claims 1 and 30 refer to delivering a flux to a hydroisomerization section, rather than recycling. See, e.g., Figs. 1B and 2.1B.

New claims 43-49 correspond to claims 2 and 23-28, but depend from claim 30, rather than claim 1. Similarly, new claims 50-57 correspond to claims 35-42, but depend from claim 30, rather than claim 1.

New claim 58 corresponds to the combined recitations of prior claims 24-27, written in independent form. New claim 59 corresponds to the prior claim 28, rewritten in independent form. It is noted that claims 24-28 were not rejected in view of prior art in the June 4, 2003 Office Action.

Finally, claims 60 and 61 recite the compositions of fluxes in "consisting essentially of" language.

Rejections Under 35 USC §112, second paragraph

Claims 1, 2, and 23-42 are rejected as allegedly being indefinite. This rejection is respectfully traversed.

One of ordinary skill in the art, upon reading original claim 1, would clearly understand the scope of the claim. In any event, claim 1 is amended to use language in accordance with conventional US practice. As for the order of the hydroisomerization and separation procedures, see, e.g., applicants' Fig. 1B wherein the separation section (4) is positioned upstream of hydroisomerization section (2).

The rejection further asserts that the phrase "said secondary channels only being accessible to the feed to be separated via the principal channels" is unclear, but does not explain why the phrase is considered unclear. The phrase is clear on its face and simply states that the secondary channels of the adsorbent are only accessible to the feed via the

principal channels of the adsorbent. In any event, claim 1 is amended to recite this concept using alternative language, i.e., the feed can only access said secondary channels via the principal channels.

Withdrawal of the rejection is respectfully requested.

Rejections Under 35 USC §103

Claims 1, 2, and 29 - 42 are rejected as allegedly being obvious in view of Zinnen et al. (U.S. 5,744,684) in combination with Krane et al. (US 3,150,205). This rejection is also respectfully traversed.

The process of US '684 involves isomerizing an alkane mixture which contains pentanes and at least one alkane having 6-8 C atoms with no more than one methyl branch. In the process, after passing the feed through a separation zone, a stream discharged from the separation zone which is enriched in alkanes having from 6 to about 8 C atoms, as well as a stream enriched in n-pentanes, are delivered to an isomerization zone. From the isomerization zone, two streams are produced. The first stream contains branched pentanes, n-pentane, and multi-branched alkanes having 6-8 C atoms. The second stream contains branched pentanes and n-pentane.

Referring to Fig. 1 of U.S. '684, from the isomerization zone 21 there is discharged both a raffinate stream 6 and an extract stream 7. The raffinate 6 is described as containing n-pentane desorbent and isomerized products, i.e., the isomerized products that are less strongly adsorbed by the adsorbent materials in the isomerization zone. These products include, for example, 2-methylbutane (a branched pentane) and 2,3-dimethylbutane (multi-branched alkane). See column 7, lines 33-48. The extract, on the other hand, is characterized as containing "mainly undesired by products, n-pentane desorbent, and branched pentanes." See column 7, lines 59-60. The raffinate 6, as shown in Table 1, contains 37.3% multibranched paraffins and 59% normal and monobranched C5-C7 paraffins. Extract 7 contains, as shown in Table 1, no multibranched paraffins and 88.6% normal and monobranched C5-C7 paraffins.

The process of US '684 contains up to three separation zones. Referring to Fig. 1 of U.S. '684, the first separation zone 20 produces a pentane stream 3 and a hexane, heptane octane stream 2. See column 9, lines 4-8. The second separation zone 22, which receives pentane stream 3 from the first separation zone, produces a n-pentane stream 4 and a branched C5 stream 5, which is then used as an octane booster in blended gasoline. See column 9, lines 15-19. The third separation zone 23, which receives the raffinate from the

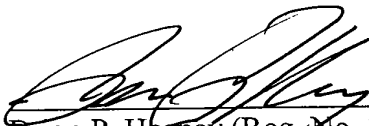
isomerization zone 21, produces a pentane stream 9 (which is recycled to the second separation zone) and a multi-methyl-branched hexane, heptane, and octane stream. See column 11, lines 1-8.

US '684 does not disclose or suggest a process wherein a separation zone produces a first stream, rich in dibranched and tribranched paraffins, which is sent to a gasoline pool, and a second stream, rich in linear and monobranched paraffins, which is recycled to the inlet of a hydroisomerisation section. Similarly, US '684 does not disclose or suggest a process wherein a separation section produces a first stream, rich in dibranched and tribranched paraffins, that is sent to a gasoline pool, a second stream, which is rich in linear paraffins, that is recycled to the inlet to a first hydroisomerisation section, and a third stream, rich in monobranched paraffins, that is recycled to the inlet to a second hydroisomerisation section.

In the rejection, the disclosure of Krane et al. (US '205) is relied on solely its disclosure concerning isomerization conditions. However, the Krane et al. disclosure does not suggest modifying the process of US '684 in such a manner so as to arrive at an embodiment in accordance with applicants' claimed process.

In view of the above remarks, it is respectfully submitted that Zinnen et al. (US '684), taken alone or in combination with the disclosure of Krane et al., fails to render obvious applicants' claimed invention. Withdrawal of the rejection under 35 USC §103 is respectfully requested.

Respectfully submitted,



Brion P. Heaney (Reg. No. 32,542)
Attorney for Applicants

MILLEN, WHITE, ZELANO & BRANIGAN, P. C.
2200 Clarendon Boulevard, Suite 1400
Arlington, Virginia 22201
(703)812-5325
Internet address: heaney@mwzb.com

Filed: September 3, 2003